REMARKS

This is intended as a full and complete response to the Office Action dated June 19, 2009, having a shortened statutory period for response set to expire on September 19, 2009. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1 and 3-22 remain pending in the application and are shown above. Claim 2 has been cancelled by Applicant without prejudice. Claims 1-22 stand rejected by the Examiner. Reconsideration of the rejected claims is requested for reasons presented below.

Claims 1, 10, 21, and 22 have been amended to clarify claimed subject matter. Basis for amendment to claims 1, 10, 21, and 22 can be found in originally filed claim 2, now cancelled, paragraphs [0056] and [0095] in the publication of the present application (US Publication 2007/0257207), and Figures of the present application. Claims 3-6 are amended for matters of form. Applicant submits that no new matter has been introduced in this amendment.

Claim Rejections – 35 USC § 103

Claims 1-7 stand rejected under 35 USC § 103(a) as being unpatentable over *Kawanami et al.* (U.S. Patent No. 5,065,034, hereinafter *Kawanami*) in view of *Lischke* (U.S. Patent No. 4,899,060, hereinafter *Lischke*). Applicant respectfully traverses the rejection. Claims 8-17 stand rejected under 35 USC § 103(a) as being unpatentable over *Kawanami* in view of *Lischke* and in further view of *Wollnik* (U.S. Patent No. 3,610,734, hereinafter *Wollnik*). Claims 18-19 and 21 stand rejected under 35 USC § 103(a) as being unpatentable over *Kawanami* in view of *Lischke* and in further view of *Szilagyi* (U.S. Patent No. 4,963,748, hereinafter *Szilagyi*). Claims 20 and 22 stand rejected under 35 USC § 103(a) as being unpatentable over *Kawanami* in view of *Lischke* and in further view of *Wollnik* as applied to claim 8 above, and further in view of *Nakasugi* (U.S. Publication No. 2004/0149935, hereinafter *Nakasugi*).

Applicant respectfully traverses these rejections on the ground that the combination of the cited references does not disclose members of an aperture system, which are to

block a portion of a charged particle beam between a charged particle beam source and a focusing lens of a charged particle beam device, wherein lateral edges of the blocking members are capable of defining a respective first boundary and a second boundary of the aperture, and wherein means for moving the members are each capable of moving the respective blocking member independently in two orthogonal directions, as set forth in independent claims 1, 21, and 22 as amended.

Kawanami, Lischke, and *Nakasugi* each teach device members having apertures for shaping a beam (see Abstracts and representative Figures of each reference). *Kawanami, Lischke,* and *Nakasugi* do not mention any beam blocking members which have lateral edges to define boundaries of the apertures. Furthermore, none of the cited references discloses blocking members which can be moved by means for moving the members, and the means being capable of moving the respective member independently in two orthogonal directions.

Rather, *Kawanami* teaches "slit plates 11a and 11b can be stably moved in constant directions while the virtual trajectories 1a and 1b thereof always intersect the beam" (column 3, lines 49 to 51). Furthermore, the slit plates 11a and 11b of *Kawanami* "...are respectively held in guides 22 and 23 so that they are movable in only the longitudinal directions of slits 14" (column 3, lines 40 to 43, and Figure 5).

Lischke discloses a diaphragm system including two diaphragms provided with the same multi-aperture arranged following one another in a beam path (Abstract). In one example, the diaphragm system provides simultaneous variation of the cross section of all particle probes by providing that one of the two diaphragms be displaceable in a plane perpendicular to the beam direction (Abstract). The diaphragm system of *Lischke* is composed of a circular control diaphragm SB", comprising a plurality of rectangular or quadratic recesses AS arranged in a line, and a shaping diaphragm FB' having the same multi-aperture structure as the control diaphragm SB", the shaping diaphragm FB' being displaceable in a plane perpendicular to the direction OA (Column 4 lines 35-60 and Figure 3a). The displacing of the shaping diaphragm FB' can be performed with the assistance of piezo-electric elements operating a control rod SE. The shaping diaphragm FB' can be

moved in different directions by means of several rods SE, SE', SE", which are preferably connected to known piezo-electric elements for moving the diaphragm (column 4 line 61 to column 5 line 3, and Figures 3b-3d). Hence, for each movement in a certain direction, a separate control rod connected to piezo-electric elements is required. *Lischke* does not disclose a means for movement of each of the diaphragm SB" and the shaping diaphragm FB' independently in two orthogonal directions.

Wollnik discloses a temperature-controlled orifice or slit for optical, ion-optical, and electron-optical instructions, comprising of one or more pairs of slit-defining platelet-shaped jaws which serve to vary the width of an orifice or slit formed by the inner edges of the jaws (Abstract). *Wollnik* further discloses that the ends of the jaws remote from their slit-defining edges are firmly secured to a support means, which consists of a material having coefficient of thermal expansion that substantially differs from that of the material of which the jaws are made, the temperature of the jaws and of the support means being controllable by heating means common to both (Abstract). *Wollnik* teaches that "assuming that the coefficient of thermal expansion a is less than b and that the distances d_1, d have be adjusted at a given temperature, then the distance d_1 between the platelets 36 and 37 will change analogously to the slit width in Fig. 2 when temperature raises (column 4 lines 1-5). Further, according to column 4 lines 15-25 of *Wollnik*, the device shape shown in Figure 4a requires that the jaws are relatively offset in different planes. *Wollnik* does not disclose a means for movement of the jaws independently in two orthogonal directions.

Nakasugi and *Szilagyi* both are slient as to the mechanism of moving aperture members.

In view of above, the combination of the cited references does not teach or suggest the subject matter in independent claims 1, 21, and 22 as amended. Particularly, the combination of cited references does not teach or suggest a first edge and a second edge each being a lateral edge, and means for moving the members which are each capable of moving the respective member independently in two orthogonal directions, as set forth in claims 1, 21, and 22 as amended.

Accordingly, the combination of *Kawanami, Lischke, Wollnik, Szilagyi* and *Nakasugi* does not teach, show, or suggest a charged particle beam device for inspecting or structuring a specimen comprising, a charged particle beam source to generate a charged particle beam, a focussing lens to focus the charged particle beam onto the specimen, and an aperture system for defining an aperture for the charged particle beam, the aperture system comprising a first member to block a first portion of the charged particle beam between the charged particle beam source and the focussing lens, a second member to block a second portion of the charged particle beam between the charged particle beam source and the focussing lens, first means (24) for moving the first member to adjust a size of a blocked first portion of the charged particle beam, and second means for moving the second member independently of the first member, wherein the first member and the second member have a respective first edge and a second edge capable of defining a respective first boundary and a second boundary of the aperture, the first edge is a first lateral edge and the second edge is a second lateral edge, and the first means and second means for moving the members are each capable of moving the respective member independently in two orthogonal directions, as recited in claim 1 as amended, and claims dependent thereon.

The combination of *Kawanami, Lischke, Wollnik, Szilagyi* and *Nakasugi* also does not teach, show, or suggest a method for focussing a charged particle beam onto a specimen comprising providing a charged particle beam device, wherein the charged particle beam comprises a charged particle beam source to generate a charged particle beam, a focussing lens to focus the charged particle beam onto a specimen, and an aperture system for defining an aperture for the charged particle beam, the aperture system comprising a first member to block a first portion of the charged particle beam between the charged particle beam source and the focussing lens, a second member to block a second portion of the charged particle beam between the charged particle beam source and the focussing lens, wherein the first member and the second member have a respective first edge and a second edge capable of defining a respective first boundary and a second boundary of the aperture, the first edge is a first lateral edge, and the second edge is a second lateral edge, first means for moving the first member to adjust a size of

the blocked first portion of the charged particle beam, and second means for moving the second member independently of the first member, wherein the first means and second means are each capable of moving the respective member independently in two orthogonal directions, generating the charged particle beam, passing the charged particle beam through a rectangular shaped aperture, passing the charged particle beam through a magnetic or electric octupole field, and directing the charged particle beam onto the specimen, as recited in claim 21 as amended.

The combination of *Kawanami, Lischke, Wollnik, Szilagyi* and *Nakasugi* also does not teach, show, or suggest a method for focussing a charged particle beam onto a specimen comprising providing a charged particle beam device, wherein the charged particle beam comprises a charged particle beam source to generate a charged particle beam, a focussing lens to focus the charged particle beam onto a specimen, and an aperture system for defining an aperture for the charged particle beam, the aperture system comprising a first member to block a first portion of the charged particle beam between the charged particle beam source and the focussing lens, a second member to block a second portion of the charged particle beam between the charged particle beam source and the focussing lens, wherein the first member and the second member have a respective first edge and a second edge capable of defining a respective first boundary and a second boundary of the aperture, the first edge is a first lateral edge, and the second edge is a second lateral edge, first means for moving the first member to adjust a size of the blocked first portion of the charged particle beam, and second means for moving the second member independently of the first member, wherein the first means and second means for moving members are each capable of moving the respective member independently in two orthogonal directions, generating the charged particle beam, passing the charged particle beam through a triangular shaped aperture, passing the charged particle beam through a magnetic or electric hexapole field, and directing the charged particle beam onto the specimen, as recited in claim 22 as amended.

Double Patenting

Claims 1-22 stand provisionally rejected on ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-22 of copending Application No. 11/923,438. Applicant respectfully requests this provisional nonstatutory obvious double patenting in view of amendment to the independent claims.

Having addressed all issues set out in the office action, Applicant respectfully submits that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,

By________________

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